



ANALYTICAL REPORT

Lab Number:	L1715594
Client:	EQ Northeast, Inc. 185 Industrial Road P.O. Box 617 Wrentham, MA 02093
ATTN:	Michael Sciola
Phone:	(508) 384-6151
Project Name:	TRAIN WASH SAMPLE #3
Project Number:	Not Specified
Report Date:	05/19/17

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508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: TRAIN WASH SAMPLE #3
Project Number: Not Specified

Lab Number: L1715594
Report Date: 05/19/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1715594-01	TRAIN WASH WATER #3 TRACK 3	WATER	CRMF 70R THIRD AVE. SOMERVILLE, MA	05/12/17 11:40	05/12/17

Project Name: TRAIN WASH SAMPLE #3
Project Number: Not Specified

Lab Number: L1715594
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Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: TRAIN WASH SAMPLE #3
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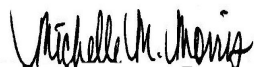
Case Narrative (continued)

Chromium, Hexavalent

L1715594-01: The sample has an elevated detection limit due to the dilution required by the sample matrix. The WG1003096-3 MS recovery (73%), performed on L1715594-01, is outside the acceptance criteria; however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 05/19/17

ORGANICS

VOLATILES

Project Name: TRAIN WASH SAMPLE #3**Lab Number:** L1715594**Project Number:** Not Specified**Report Date:** 05/19/17**SAMPLE RESULTS**

Lab ID: L1715594-01
 Client ID: TRAIN WASH WATER #3 TRACK 3
 Sample Location: CRMF 70R THIRD AVE. SOMERVILLE, MA

Date Collected: 05/12/17 11:40
 Date Received: 05/12/17
 Field Prep: Not Specified

Matrix: Water
 Analytical Method: 5,624
 Analytical Date: 05/15/17 01:15
 Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Benzene	ND		ug/l	1.0	--	1
Acrolein ¹	ND		ug/l	8.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	102		80-120
Fluorobenzene	104		80-120
4-Bromofluorobenzene	97		80-120

Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

Method Blank Analysis Batch Quality Control

Analytical Method: 5,624
 Analytical Date: 05/14/17 23:04
 Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1003908-4					
Benzene	ND		ug/l	1.0	--
Acrolein ¹	ND		ug/l	8.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	103		80-120
Fluorobenzene	101		80-120
4-Bromofluorobenzene	98		80-120

Lab Control Sample Analysis**Batch Quality Control****Project Name:** TRAIN WASH SAMPLE #3**Lab Number:** L1715594**Project Number:** Not Specified**Report Date:** 05/19/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1003908-3								
Benzene	115		-		84-116	-		30
Acrolein ¹	78		-		40-160	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	102				80-120
Fluorobenzene	105				80-120
4-Bromofluorobenzene	100				80-120

Matrix Spike Analysis

Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003908-10 QC Sample: L1715362-01 Client ID: MS Sample												
Methylene chloride	ND	200	200	100		-	-		70-111	-		30
1,1-Dichloroethane	ND	200	190	95		-	-		78-116	-		30
Chloroform	22	200	260	119	Q	-	-		86-111	-		30
Carbon tetrachloride	ND	200	250	125	Q	-	-		60-112	-		30
1,2-Dichloropropane	ND	200	220	110		-	-		83-113	-		30
Dibromochloromethane	ND	200	210	105		-	-		58-129	-		30
1,1,2-Trichloroethane	ND	200	210	105		-	-		80-118	-		30
2-Chloroethylvinyl ether	ND	200	210	105		-	-		69-124	-		30
Tetrachloroethene	ND	200	210	105		-	-		80-126	-		30
Chlorobenzene	ND	200	200	100		-	-		80-126	-		30
Trichlorofluoromethane	ND	200	270	135	Q	-	-		83-128	-		30
1,2-Dichloroethane	ND	200	230	115	Q	-	-		82-110	-		30
1,1,1-Trichloroethane	ND	200	240	120	Q	-	-		72-109	-		30
Bromodichloromethane	ND	200	220	110		-	-		71-120	-		30
trans-1,3-Dichloropropene	ND	200	210	105		-	-		73-106	-		30
cis-1,3-Dichloropropene	ND	200	210	105		-	-		78-111	-		30
Bromoform	ND	200	210	105		-	-		45-131	-		30
1,1,2,2-Tetrachloroethane	ND	200	210	105		-	-		81-122	-		30
Benzene	ND	200	220	110		-	-		84-116	-		30
Toluene	ND	200	210	105		-	-		83-121	-		30
Ethylbenzene	ND	200	220	110		-	-		84-123	-		30
Chloromethane	ND	200	240	120		-	-		70-144	-		30
Bromomethane	ND	200	190	95		-	-		63-141	-		30
Vinyl chloride	ND	200	270	135	Q	-	-		56-118	-		30

Matrix Spike Analysis**Batch Quality Control****Project Name:** TRAIN WASH SAMPLE #3**Project Number:** Not Specified**Lab Number:** L1715594**Report Date:** 05/19/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003908-10 QC Sample: L1715362-01 Client ID: MS Sample												
Chloroethane	ND	200	290	145	Q	-	-		74-130	-		30
1,1-Dichloroethene	ND	200	220	110		-	-		77-116	-		30
trans-1,2-Dichloroethene	ND	200	190	95		-	-		81-121	-		30
cis-1,2-Dichloroethene ¹	ND	200	210	105		-	-		85-110	-		30
Trichloroethene	ND	200	220	110		-	-		84-118	-		30
1,2-Dichlorobenzene	ND	200	220	110		-	-		78-128	-		30
1,3-Dichlorobenzene	ND	200	210	105		-	-		77-125	-		30
1,4-Dichlorobenzene	ND	200	210	105		-	-		77-125	-		30
p/m-Xylene ¹	ND	400	430	108		-	-		81-121	-		30
o-Xylene ¹	ND	200	210	105		-	-		81-124	-		30
Styrene ¹	ND	200	210	105		-	-		84-133	-		30
Acetone ¹	440	500	1300	172	Q	-	-		40-160	-		30
Carbon disulfide ¹	ND	200	190	95		-	-		54-134	-		30
2-Butanone ¹	ND	500	520	104		-	-		57-116	-		30
Vinyl acetate ¹	ND	400	340	85		-	-		40-160	-		30
4-Methyl-2-pentanone ¹	ND	500	530	106		-	-		79-125	-		30
2-Hexanone ¹	ND	500	550	110		-	-		78-120	-		30
Acrolein ¹	ND	400	630	158		-	-		40-160	-		30
Acrylonitrile ¹	ND	400	370	92		-	-		66-123	-		30
Dibromomethane ¹	ND	200	220	110		-	-		65-126	-		30

Matrix Spike Analysis*Batch Quality Control***Project Name:** TRAIN WASH SAMPLE #3**Lab Number:** L1715594**Project Number:** Not Specified**Report Date:** 05/19/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003908-10 QC Sample: L1715362-01 Client ID: MS Sample

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
4-Bromofluorobenzene	99				80-120
Fluorobenzene	103				80-120
Pentafluorobenzene	108				80-120

Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003908-9 QC Sample: L1715362-01 Client ID: DUP Sample						
Methylene chloride	ND	ND	ug/l	NC		30
1,1-Dichloroethane	ND	ND	ug/l	NC		30
Chloroform	22	21	ug/l	5		30
Carbon tetrachloride	ND	ND	ug/l	NC		30
1,2-Dichloropropane	ND	ND	ug/l	NC		30
Dibromochloromethane	ND	ND	ug/l	NC		30
1,1,2-Trichloroethane	ND	ND	ug/l	NC		30
2-Chloroethylvinyl ether	ND	ND	ug/l	NC		30
Tetrachloroethene	ND	ND	ug/l	NC		30
Chlorobenzene	ND	ND	ug/l	NC		30
Trichlorofluoromethane	ND	ND	ug/l	NC		30
1,2-Dichloroethane	ND	ND	ug/l	NC		30
1,1,1-Trichloroethane	ND	ND	ug/l	NC		30
Bromodichloromethane	ND	ND	ug/l	NC		30
trans-1,3-Dichloropropene	ND	ND	ug/l	NC		30
cis-1,3-Dichloropropene	ND	ND	ug/l	NC		30
Bromoform	ND	ND	ug/l	NC		30
1,1,2,2-Tetrachloroethane	ND	ND	ug/l	NC		30
Benzene	ND	ND	ug/l	NC		30
Toluene	ND	ND	ug/l	NC		30
Ethylbenzene	ND	ND	ug/l	NC		30

Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003908-9 QC Sample: L1715362-01 Client ID: DUP Sample						
Chloromethane	ND	ND	ug/l	NC		30
Bromomethane	ND	ND	ug/l	NC		30
Vinyl chloride	ND	ND	ug/l	NC		30
Chloroethane	ND	ND	ug/l	NC		30
1,1-Dichloroethene	ND	ND	ug/l	NC		30
trans-1,2-Dichloroethene	ND	ND	ug/l	NC		30
cis-1,2-Dichloroethene ¹	ND	ND	ug/l	NC		30
Trichloroethene	ND	ND	ug/l	NC		30
1,2-Dichlorobenzene	ND	ND	ug/l	NC		30
1,3-Dichlorobenzene	ND	ND	ug/l	NC		30
1,4-Dichlorobenzene	ND	ND	ug/l	NC		30
p/m-Xylene ¹	ND	ND	ug/l	NC		30
o-Xylene ¹	ND	ND	ug/l	NC		30
Xylene (Total) ¹	ND	ND	ug/l	NC		30
Styrene ¹	ND	ND	ug/l	NC		30
Acetone ¹	440	280	ug/l	44	Q	30
Carbon disulfide ¹	ND	ND	ug/l	NC		30
2-Butanone ¹	ND	ND	ug/l	NC		30
Vinyl acetate ¹	ND	ND	ug/l	NC		30
4-Methyl-2-pentanone ¹	ND	ND	ug/l	NC		30
2-Hexanone ¹	ND	ND	ug/l	NC		30

Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003908-9 QC Sample: L1715362-01 Client ID: DUP Sample						
Acrolein ¹	ND	ND	ug/l	NC		30
Acrylonitrile ¹	ND	ND	ug/l	NC		30
Dibromomethane ¹	ND	ND	ug/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	103		103		80-120
Fluorobenzene	99		99		80-120
4-Bromofluorobenzene	98		96		80-120

SEMIVOLATILES

Project Name: TRAIN WASH SAMPLE #3
Project Number: Not Specified

Lab Number: L1715594
Report Date: 05/19/17

SAMPLE RESULTS

Lab ID: L1715594-01
Client ID: TRAIN WASH WATER #3 TRACK 3
Sample Location: CRMF 70R THIRD AVE. SOMERVILLE, MA

Date Collected: 05/12/17 11:40
Date Received: 05/12/17
Field Prep: Not Specified
Extraction Method: EPA 625
Extraction Date: 05/14/17 21:45

Matrix: Water
Analytical Method: 5,625
Analytical Date: 05/16/17 19:03
Analyst: SZ

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.9	--	1
Butyl benzyl phthalate	ND		ug/l	4.9	--	1
Di-n-butylphthalate	ND		ug/l	4.9	--	1
Di-n-octylphthalate	ND		ug/l	4.9	--	1
Diethyl phthalate	ND		ug/l	4.9	--	1
Dimethyl phthalate	ND		ug/l	4.9	--	1
Phenol	5.7		ug/l	4.9	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	22		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	74		15-120
2,4,6-Tribromophenol	92		10-120
4-Terphenyl-d14	83		33-120

Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

Method Blank Analysis Batch Quality Control

Analytical Method: 5,625
 Analytical Date: 05/16/17 14:50
 Analyst: SZ

Extraction Method: EPA 625
 Extraction Date: 05/14/17 21:45

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1003404-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--
Phenol	ND		ug/l	5.0	--

Tentatively Identified Compounds

Unknown	9.30	J	ug/l
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Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	57		21-120
Phenol-d6	39		10-120
Nitrobenzene-d5	90		23-120
2-Fluorobiphenyl	92		15-120
2,4,6-Tribromophenol	98		10-120
4-Terphenyl-d14	104		33-120

Lab Control Sample Analysis

Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1003404-2								
Acenaphthene	94		-		47-145	-		30
1,2,4-Trichlorobenzene	90		-		44-142	-		30
Hexachlorobenzene	97		-		1-152	-		30
Bis(2-chloroethyl)ether	91		-		12-158	-		30
2-Chloronaphthalene	95		-		60-118	-		30
3,3'-Dichlorobenzidine	40		-		1-262	-		30
2,4-Dinitrotoluene	117		-		39-139	-		30
2,6-Dinitrotoluene	112		-		50-158	-		30
Fluoranthene	96		-		26-137	-		30
4-Chlorophenyl phenyl ether	97		-		25-158	-		30
4-Bromophenyl phenyl ether ¹	100		-		53-127	-		30
Bis(2-chloroisopropyl)ether	88		-		36-166	-		30
Bis(2-chloroethoxy)methane	99		-		33-184	-		30
Hexachlorobutadiene	88		-		24-116	-		30
Hexachloroethane	83		-		40-113	-		30
Isophorone	96		-		21-196	-		30
Naphthalene	90		-		21-133	-		30
Nitrobenzene	95		-		35-180	-		30
n-Nitrosodi-n-propylamine	94		-		1-230	-		30
Bis(2-Ethylhexyl)phthalate	114		-		8-158	-		30
Butyl benzyl phthalate	100		-		1-152	-		30
Di-n-butylphthalate	105		-		1-118	-		30
Di-n-octylphthalate	105		-		4-146	-		30

Lab Control Sample Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1003404-2								
Diethyl phthalate	98		-		1-114	-		30
Dimethyl phthalate	97		-		1-112	-		30
Benzo(a)anthracene	97		-		33-143	-		30
Benzo(a)pyrene	95		-		17-163	-		30
Benzo(b)fluoranthene	100		-		24-159	-		30
Benzo(k)fluoranthene	94		-		11-162	-		30
Chrysene	99		-		17-168	-		30
Acenaphthylene	95		-		33-145	-		30
Anthracene	94		-		27-133	-		30
Benzo(ghi)perylene	102		-		1-219	-		30
Fluorene	95		-		59-121	-		30
Phenanthrene	93		-		54-120	-		30
Dibenzo(a,h)anthracene	103		-		1-227	-		30
Indeno(1,2,3-cd)Pyrene	99		-		1-171	-		30
Pyrene	94		-		52-115	-		30
2,4,6-Trichlorophenol	101		-		37-144	-		30
P-Chloro-M-Cresol ¹	94		-		22-147	-		30
2-Chlorophenol	90		-		23-134	-		30
2,4-Dichlorophenol	101		-		39-135	-		30
2,4-Dimethylphenol	97		-		32-119	-		30
2-Nitrophenol	114		-		29-182	-		30
4-Nitrophenol	55		-		1-132	-		30
2,4-Dinitrophenol	109		-		1-191	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1003404-2								
4,6-Dinitro-o-cresol ¹	105		-		1-181	-		30
Pentachlorophenol	98		-		14-176	-		30
Phenol	43		-		5-112	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	66				21-120
Phenol-d6	47				10-120
Nitrobenzene-d5	99				23-120
2-Fluorobiphenyl	101				15-120
2,4,6-Tribromophenol	108				10-120
4-Terphenyl-d14	103				33-120

Matrix Spike Analysis

Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003404-3 QC Sample: L1715203-01 Client ID: MS Sample												
Acenaphthene	ND	40	34	85		-	-		47-145	-		30
1,2,4-Trichlorobenzene	ND	40	32	80		-	-		44-142	-		30
Hexachlorobenzene	ND	40	34	85		-	-		1-152	-		30
Bis(2-chloroethyl)ether	ND	40	32	80		-	-		12-158	-		30
2-Chloronaphthalene	ND	40	34	85		-	-		60-118	-		30
3,3'-Dichlorobenzidine	ND	80	25	31		-	-		1-262	-		30
2,4-Dinitrotoluene	ND	40	41	100		-	-		39-139	-		30
2,6-Dinitrotoluene	ND	40	39	98		-	-		50-158	-		30
Fluoranthene	ND	40	33	83		-	-		26-137	-		30
4-Chlorophenyl phenyl ether	ND	40	35	88		-	-		25-158	-		30
4-Bromophenyl phenyl ether ¹	ND	40	37	93		-	-		53-127	-		30
Bis(2-chloroisopropyl)ether	ND	40	30	75		-	-		36-166	-		30
Bis(2-chloroethoxy)methane	ND	40	34	85		-	-		33-184	-		30
Hexachlorobutadiene	ND	40	32	80		-	-		24-116	-		30
Hexachloroethane	ND	40	30	75		-	-		40-113	-		30
Isophorone	ND	40	33	83		-	-		21-196	-		30
Naphthalene	ND	40	33	83		-	-		21-133	-		30
Nitrobenzene	ND	40	33	83		-	-		35-180	-		30
n-Nitrosodi-n-propylamine	ND	40	32	80		-	-		1-230	-		30
Bis(2-Ethylhexyl)phthalate	ND	40	39	98		-	-		8-158	-		30
Butyl benzyl phthalate	ND	40	36	90		-	-		1-152	-		30
Di-n-butylphthalate	ND	40	38	95		-	-		1-118	-		30
Di-n-octylphthalate	ND	40	38	95		-	-		4-146	-		30
Diethyl phthalate	ND	40	34	85		-	-		1-114	-		30

Matrix Spike Analysis**Batch Quality Control****Project Name:** TRAIN WASH SAMPLE #3**Project Number:** Not Specified**Lab Number:** L1715594**Report Date:** 05/19/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003404-3 QC Sample: L1715203-01 Client ID: MS Sample												
Dimethyl phthalate	ND	40	33	83		-	-		1-112	-		30
Benzo(a)anthracene	ND	40	35	88		-	-		33-143	-		30
Benzo(a)pyrene	ND	40	35	88		-	-		17-163	-		30
Benzo(b)fluoranthene	ND	40	36	90		-	-		24-159	-		30
Benzo(k)fluoranthene	ND	40	35	88		-	-		11-162	-		30
Chrysene	ND	40	35	88		-	-		17-168	-		30
Acenaphthylene	ND	40	33	83		-	-		33-145	-		30
Anthracene	ND	40	34	85		-	-		27-133	-		30
Benzo(ghi)perylene	ND	40	38	95		-	-		1-219	-		30
Fluorene	ND	40	35	88		-	-		59-121	-		30
Phenanthrene	ND	40	34	85		-	-		54-120	-		30
Dibenzo(a,h)anthracene	ND	40	38	95		-	-		1-227	-		30
Indeno(1,2,3-cd)Pyrene	ND	40	37	93		-	-		1-171	-		30
Pyrene	ND	40	34	85		-	-		52-115	-		30
2,4,6-Trichlorophenol	ND	40	36	90		-	-		37-144	-		30
P-Chloro-M-Cresol ¹	ND	40	33	83		-	-		22-147	-		30
2-Chlorophenol	ND	40	32	80		-	-		23-134	-		30
2,4-Dichlorophenol	ND	40	35	88		-	-		39-135	-		30
2,4-Dimethylphenol	ND	40	32	80		-	-		32-119	-		30
2-Nitrophenol	ND	40	40	100		-	-		29-182	-		30
4-Nitrophenol	ND	40	20	50		-	-		1-132	-		30
2,4-Dinitrophenol	ND	40	42	110		-	-		1-191	-		30
4,6-Dinitro-o-cresol ¹	ND	40	39	98		-	-		1-181	-		30
Pentachlorophenol	ND	40	37	93		-	-		14-176	-		30

Matrix Spike Analysis*Batch Quality Control***Project Name:** TRAIN WASH SAMPLE #3**Lab Number:** L1715594**Project Number:** Not Specified**Report Date:** 05/19/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003404-3 QC Sample: L1715203-01 Client ID: MS Sample												
Phenol	ND	40	15	38		-	-		5-112	-		30

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria
2,4,6-Tribromophenol	99				10-120
2-Fluorobiphenyl	88				15-120
2-Fluorophenol	58				21-120
4-Terphenyl-d14	92				33-120
Nitrobenzene-d5	86				23-120
Phenol-d6	39				10-120

Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Semivolatiles by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003404-4 QC Sample: L1715430-01 Client ID: DUP Sample						
Acenaphthene	ND	ND	ug/l	NC		30
Benzidine ¹	ND	ND	ug/l	NC		30
1,2,4-Trichlorobenzene	ND	ND	ug/l	NC		30
Hexachlorobenzene	ND	ND	ug/l	NC		30
Bis(2-chloroethyl)ether	ND	ND	ug/l	NC		30
2-Chloronaphthalene	ND	ND	ug/l	NC		30
3,3'-Dichlorobenzidine	ND	ND	ug/l	NC		30
2,4-Dinitrotoluene	ND	ND	ug/l	NC		30
2,6-Dinitrotoluene	ND	ND	ug/l	NC		30
Azobenzene ¹	ND	ND	ug/l	NC		30
Fluoranthene	ND	ND	ug/l	NC		30
4-Chlorophenyl phenyl ether	ND	ND	ug/l	NC		30
4-Bromophenyl phenyl ether ¹	ND	ND	ug/l	NC		30
Bis(2-chloroisopropyl)ether	ND	ND	ug/l	NC		30
Bis(2-chloroethoxy)methane	ND	ND	ug/l	NC		30
Hexachlorobutadiene	ND	ND	ug/l	NC		30
Hexachlorocyclopentadiene ¹	ND	ND	ug/l	NC		30
Hexachloroethane	ND	ND	ug/l	NC		30
Isophorone	ND	ND	ug/l	NC		30
Naphthalene	ND	ND	ug/l	NC		30
Nitrobenzene	ND	ND	ug/l	NC		30

Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Semivolatiles Organics by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003404-4 QC Sample: L1715430-01 Client ID: DUP Sample						
NitrosoDiPhenylAmine(NDPA)/DPA ¹	ND	ND	ug/l	NC		30
n-Nitrosodi-n-propylamine	ND	ND	ug/l	NC		30
Bis(2-Ethylhexyl)phthalate	ND	ND	ug/l	NC		30
Butyl benzyl phthalate	ND	ND	ug/l	NC		30
Di-n-butylphthalate	ND	ND	ug/l	NC		30
Di-n-octylphthalate	ND	ND	ug/l	NC		30
Diethyl phthalate	ND	ND	ug/l	NC		30
Dimethyl phthalate	ND	ND	ug/l	NC		30
Benzo(a)anthracene	ND	ND	ug/l	NC		30
Benzo(a)pyrene	ND	ND	ug/l	NC		30
Benzo(b)fluoranthene	ND	ND	ug/l	NC		30
Benzo(k)fluoranthene	ND	ND	ug/l	NC		30
Chrysene	ND	ND	ug/l	NC		30
Acenaphthylene	ND	ND	ug/l	NC		30
Anthracene	ND	ND	ug/l	NC		30
Benzo(ghi)perylene	ND	ND	ug/l	NC		30
Fluorene	ND	ND	ug/l	NC		30
Phenanthrene	ND	ND	ug/l	NC		30
Dibenzo(a,h)anthracene	ND	ND	ug/l	NC		30
Indeno(1,2,3-cd)Pyrene	ND	ND	ug/l	NC		30
Pyrene	ND	ND	ug/l	NC		30

Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Semivolatiles by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003404-4 QC Sample: L1715430-01 Client ID: DUP Sample						
Biphenyl ¹	ND	ND	ug/l	NC		30
Aniline ¹	ND	ND	ug/l	NC		30
4-Chloroaniline ¹	ND	ND	ug/l	NC		30
1-Methylnaphthalene ¹	ND	ND	ug/l	NC		30
2-Nitroaniline ¹	ND	ND	ug/l	NC		30
3-Nitroaniline ¹	ND	ND	ug/l	NC		30
4-Nitroaniline ¹	ND	ND	ug/l	NC		30
Dibenzofuran ¹	ND	ND	ug/l	NC		30
2-Methylnaphthalene ¹	ND	ND	ug/l	NC		30
Acetophenone ¹	ND	ND	ug/l	NC		30
n-Nitrosodimethylamine ¹	ND	ND	ug/l	NC		30
2,4,6-Trichlorophenol	ND	ND	ug/l	NC		30
P-Chloro-M-Cresol ¹	ND	ND	ug/l	NC		30
2-Chlorophenol	ND	ND	ug/l	NC		30
2,4-Dichlorophenol	ND	ND	ug/l	NC		30
2,4-Dimethylphenol	ND	ND	ug/l	NC		30
2-Nitrophenol	ND	ND	ug/l	NC		30
4-Nitrophenol	ND	ND	ug/l	NC		30
2,4-Dinitrophenol	ND	ND	ug/l	NC		30
4,6-Dinitro-o-cresol ¹	ND	ND	ug/l	NC		30
Pentachlorophenol	ND	ND	ug/l	NC		30

Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Semivolatiles by GC/MS - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003404-4 QC Sample: L1715430-01 Client ID: DUP Sample						
Phenol	ND	ND	ug/l	NC		30
2-Methylphenol ¹	ND	ND	ug/l	NC		30
3-Methylphenol/4-Methylphenol ¹	ND	ND	ug/l	NC		30
2,4,5-Trichlorophenol ¹	ND	ND	ug/l	NC		30
Benzoic Acid ¹	ND	ND	ug/l	NC		30
Benzyl Alcohol ¹	13	13	ug/l	0		30
Carbazole ¹	ND	ND	ug/l	NC		30
Pyridine ¹	ND	ND	ug/l	NC		30
n-Decane ¹	ND	ND	ug/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		52		21-120
Phenol-d6	37		35		10-120
Nitrobenzene-d5	85		83		23-120
2-Fluorobiphenyl	89		90		15-120
2,4,6-Tribromophenol	99		105		10-120
4-Terphenyl-d14	92		98		33-120

METALS

Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

SAMPLE RESULTS

Lab ID: L1715594-01

Date Collected: 05/12/17 11:40

Client ID: TRAIN WASH WATER #3 TRACK 3

Date Received: 05/12/17

Sample Location: CRMF 70R THIRD AVE. SOMERVILLE

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Cadmium, Total	0.00367		mg/l	0.00100	--	1	05/15/17 11:15	05/16/17 07:46	EPA 3005A	3,200.8	BV
Lead, Total	0.05836		mg/l	0.00100	--	1	05/15/17 11:15	05/16/17 07:46	EPA 3005A	3,200.8	BV
Zinc, Total	0.9643		mg/l	0.01000	--	1	05/15/17 11:15	05/16/17 07:46	EPA 3005A	3,200.8	BV
Low-Level Mercury - Mansfield Lab											
Mercury, Total	ND		ug/l	0.0005	--	1	05/17/17 08:10	05/17/17 14:20	EPA 1631E	82,1631E	LC



Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1003502-1										
Cadmium, Total	ND		mg/l	0.00100	--	1	05/15/17 11:15	05/16/17 06:46	3,200.8	BV
Lead, Total	ND		mg/l	0.0010	--	1	05/15/17 11:15	05/16/17 06:46	3,200.8	BV
Zinc, Total	ND		mg/l	0.01000	--	1	05/15/17 11:15	05/16/17 06:46	3,200.8	BV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Low-Level Mercury - Mansfield Lab for sample(s): 01 Batch: WG1004299-1										
Mercury, Total	ND		ug/l	0.0005	--	1	05/17/17 08:10	05/17/17 10:37	82,1631E	LC

Prep Information

Digestion Method: EPA 1631E

Lab Control Sample Analysis**Batch Quality Control****Project Name:** TRAIN WASH SAMPLE #3**Project Number:** Not Specified**Lab Number:** L1715594**Report Date:** 05/19/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1003502-2								
Cadmium, Total	105		-		85-115	-		
Lead, Total	98		-		85-115	-		
Zinc, Total	103		-		85-115	-		
Low-Level Mercury - Mansfield Lab Associated sample(s): 01 Batch: WG1004299-2 SRM Lot Number: HG-LOW								
Mercury, Total	100		-		77-123	-		24

Matrix Spike Analysis **Batch Quality Control**

Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003502-3 QC Sample: L1715284-01 Client ID: MS Sample												
Cadmium, Total	ND	0.051	0.05332	104		-	-		70-130	-		20
Lead, Total	ND	0.51	0.4970	97		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5264	105		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003502-5 QC Sample: L1715540-01 Client ID: MS Sample												
Cadmium, Total	ND	0.051	0.05425	106		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5142	101		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5196	104		-	-		70-130	-		20
Low-Level Mercury - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1004299-3 WG1004299-4 QC Sample: L1715138-01 Client ID: MS Sample												
Mercury, Total	0.0173	0.005	0.0225	104		0.0226	106		71-125	0		24

Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003502-4 QC Sample: L1715284-01 Client ID: DUP Sample						
Lead, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003502-6 QC Sample: L1715540-01 Client ID: DUP Sample						
Lead, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20

INORGANICS & MISCELLANEOUS

Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

SAMPLE RESULTS

Lab ID: L1715594-01
 Client ID: TRAIN WASH WATER #3 TRACK 3
 Sample Location: CRMF 70R THIRD AVE. SOMERVILLE
 Matrix: Water

Date Collected: 05/12/17 11:40
 Date Received: 05/12/17
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	52.		mg/l	1.0	NA	1	-	05/16/17 02:50	121,2540D	VB
Oil & Grease, Hem-Grav	ND		mg/l	4.4	--	1.1	05/13/17 08:00	05/13/17 09:00	74,1664A	KZ
Chromium, Hexavalent	ND		mg/l	0.050	--	5	05/12/17 20:45	05/12/17 21:28	1,7196A	JC



Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1003096-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	05/12/17 20:45	05/12/17 21:25	1,7196A	JC
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1003196-1										
Oil & Grease, Hem-Grav	ND		mg/l	4.0	--	1	05/13/17 08:00	05/13/17 09:00	74,1664A	KZ
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1003681-1										
Solids, Total Suspended	ND		mg/l	1.0	NA	1	-	05/16/17 02:50	121,2540D	VB

Lab Control Sample Analysis

Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1003096-2								
Chromium, Hexavalent	96		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1003196-2								
Oil & Grease, Hem-Grav	92		-		78-114	-		18

Matrix Spike Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Lab Number: L1715594

Project Number: Not Specified

Report Date: 05/19/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
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General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003096-3 QC Sample: L1715594-01 Client ID: TRAIN WASH WATER #3 TRACK 3

Chromium, Hexavalent	ND	0.5	0.364	73	Q	-	-		85-115	-		20
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General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003196-4 QC Sample: L1714799-01 Client ID: MS Sample

Oil & Grease, Hem-Grav	ND	40	29	72	Q	-	-		78-114	-		18
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Lab Duplicate Analysis Batch Quality Control

Project Name: TRAIN WASH SAMPLE #3

Project Number: Not Specified

Lab Number: L1715594

Report Date: 05/19/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003096-4 QC Sample: L1715594-01 Client ID: TRAIN WASH WATER #3 TRACK 3						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003196-3 QC Sample: L1715072-02 Client ID: DUP Sample						
Oil & Grease, Hem-Grav	ND	ND	mg/l	NC		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003681-2 QC Sample: L1715491-01 Client ID: DUP Sample						
Solids, Total Suspended	200	220	mg/l	10		29

Project Name: TRAIN WASH SAMPLE #3**Project Number:** Not Specified**Lab Number:** L1715594**Report Date:** 05/19/17**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

Cooler Information Custody Seal**Cooler**

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1715594-01A	Vial Na2S2O3 preserved	A	N/A	4.9	Y	Absent	624(3)
L1715594-01B	Vial Na2S2O3 preserved	A	N/A	4.9	Y	Absent	624(3)
L1715594-01C	Vial Na2S2O3 preserved	A	N/A	4.9	Y	Absent	624(3)
L1715594-01D	Teflon 250ml HCl preserved	A	<2	4.9	Y	Absent	A2-HG-1631(28)
L1715594-01E	Plastic 250ml HNO3 preserved	A	<2	4.9	Y	Absent	CD-2008T(180),ZN- 2008T(180),PB-2008T(180)
L1715594-01F	Amber 1000ml Na2S2O3	A	5	4.9	Y	Absent	625(7)
L1715594-01G	Amber 1000ml Na2S2O3	A	5	4.9	Y	Absent	625(7)
L1715594-01H	Plastic 250ml unpreserved	A	5	4.9	Y	Absent	HEXCR-7196(1)
L1715594-01J	Amber 1000ml HCl preserved	A	N/A	4.9	Y	Absent	OG-1664(28)
L1715594-01K	Amber 1000ml HCl preserved	A	N/A	4.9	Y	Absent	OG-1664(28)
L1715594-01L	Plastic 950ml unpreserved	A	5	4.9	Y	Absent	TSS-2540-LOW(7)

*Values in parentheses indicate holding time in days

Project Name: TRAIN WASH SAMPLE #3**Lab Number:** L1715594**Project Number:** Not Specified**Report Date:** 05/19/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the

Report Format: Data Usability Report



Project Name: TRAIN WASH SAMPLE #3**Lab Number:** L1715594**Project Number:** Not Specified**Report Date:** 05/19/17**Data Qualifiers**

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: TRAIN WASH SAMPLE #3
Project Number: Not Specified

Lab Number: L1715594
Report Date: 05/19/17

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 5 Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).
- 74 Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.
- 82 Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry. USEPA Office of Water, EPA Method 1631 Revision E, EPA-821-R-02-019, August 2002.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.

ID No.:17873

Facility: **Company-wide**

Revision 10

Department: **Quality Assurance**

Published Date: 1/16/2017 11:00:05 AM

Title: **Certificate/Approval Program Summary**

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Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility**EPA 624:** m/p-xylene, o-xylene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**EPA 300:** DW: Bromide**EPA 6860:** NPW and SCM: Perchlorate**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation**EPA 9012B:** NPW: Total Cyanide**EPA 9050A:** NPW: Specific Conductance**SM3500:** NPW: Ferrous Iron**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO₂, NO₃.**SM5310C:** DW: Dissolved Organic Carbon**Mansfield Facility****SM 2540D:** TSS**EPA 3005A** NPW**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:**Drinking Water****EPA 300.0:** Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.****EPA 624:** Volatile Halocarbons & Aromatics,**EPA 608:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.****Mansfield Facility:****Drinking Water****EPA 200.7:** Ba, Be, Cd, Cr, Cu, Ni, Na, Ca. **EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, TL. **EPA 245.1 Hg.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.**EPA 245.1 Hg.****SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

